EDITORIALS

THE SUPREME COURT DECISION IN LINDER VS. UNITED STATES—AS IT AFFECTS THE HARRISON NARCOTIC ACT

Many physicians and other citizens are keenly interested in the full meaning of the decision (April 13, 1925) of the United States Supreme Court construing the Harrison Narcotic Act in Linder vs. United States. So much disturbance was caused by an exciting story of this decision, published in the bulletin of the "White Cross," that at our request, Dr. W. C. Woodward, executive secretary, Bureau of Legal Medicine and Legislation, American Medical Association, prepared for us the following useful analysis of the whole question:

The decision referred to in your letter of February 2, construing the Harrison Narcotic Act, is that of the United States Supreme Court in Linder vs. United States, decided April 13, 1925. That decision is as binding in California as in any other part of the United States. It will undoubtedly add to the difficulties of enforcing the Harrison Narcotic Act, but it helps to clear up a situation often embarrassing to the physician and tends to relieve him of bureaucratic control.

Treasury Department Regulations No. 35, relating to the importation, manufacture, production, compounding, sale, dispensing, and giving away of opium or coca leaves, their salts, derivatives, or preparations thereof, promulgated under the Harrison Narcotic Act, provide, among other things, as follows:

"Article 117. . . . An order purporting to be a prescription issued to an addict or habitual user of narcotics, not in the course of professional treatment in an attempted cure of the habit, but for the purpose of providing the user with narcotics sufficient to keep him comfortable in maintaining his customary use is not a prescription within the meaning and intent of the act; and persons filling and receiving drugs under such an order, as well as the person issuing it, will be regarded as guilty of violation of the law."

Color was given to the supposed validity of this regulation or instruction by decisions of the United States Supreme Court, namely, U. S. vs. Doremus, 249 U. S. 93; Webb vs. U. S., 249 U. S. 96; Jin Fuey Moy vs. U. S., 254 U. S. 189, and U. S. vs. Behrman, 258 U. S. 280. These decisions were generally construed as preventing a physician from giving narcotics for the relief of the sufferings of an addict incident to the withdrawal or insufficiency of his supply of narcotics, except as an incident to the cure of the habit and even then only when the patient was in confinement. The result has been that no matter how acute the sufferings of an addict might be, incident to the partial or total withdrawal of his drug, the average physician was afraid to do anything for his relief, lest he be summoned into court and held up to public obloquy as a "dope peddler."

There now comes into the case one Charles O. Linder, of Spokane, Washington. Linder is recorded in the American Medical Directory as having graduated in 1905 from the Thompsonian Medical College, of Allentown, Pennsylvania, concerning which the directory records: "Organized in 1904. Extinct. No evidence to show that classes were ever held." Linder, however, appears to have been registered in the state of Washington in 1920. The facts of the case seem to be sufficiently stated in the opinion of the court, where they are quoted from the indictment. They charge Linder with a violation of the Harrison Narcotic Act on about April 1, 1922, at Spokane—

"in that he did then and there knowingly, wilfully and unlawfully sell, barter and give to Ida Casey a compound, manufacture and derivative of opium, to-wit: one (1) tablet of morphine and a compound, manufacture and derivative of coca leaves, to-wit: three (3) tablets of cocaine, not in pursuance of any written order of Ida Casey on a form issued for that purpose by the Commissioner of Internal Revenue of the United States; that the defendant was a duly licensed physician and registered under the act; that Ida Casey was a person addicted to the habitual use of morphine and cocaine and known by the defendant to be so addicted; that Ida Casey did not require the administration of either morphine or cocaine by reason of any disease other than such addiction; that the defendant did not dispense any of the drugs for the purpose of treating any disease or condition other than such addiction; that none of the drugs so dispensed by the defendant was administered to or intended by the defendant to be administered to Ida Casey by the defendant or any nurse, or person acting under the direction of the defendant; nor were any of the drugs consumed or intended to be consumed by Ida Casey in the presence of the defendant, but that all of the drugs were put in the possession or control of Ida Casey with the intention on the part of the defendant that Ida Casey would use the same by self-administration in divided doses over a period of time, the amount of each of said drugs dispensed being more than sufficient or necessary to satisfy the cravings of Ida Casey therefor if consumed by her all at one time; that Ida Casey was not in any way restrained or prevented from disposing of the drugs in any manner she saw fit and that the drugs so dispensed by the defendant were in the form in which said drugs are usually consumed by persons addicted to the habitual use thereof to satisfy their craving therefor and were adapted for consumption."

Linder was convicted in the District Court, Eastern Court of Washington. His conviction was affirmed by the Circuit Court of Appeals for the Ninth Circuit. On a writ of certiorari, Linder carried the case to the United States Supreme Court. The decision of the court may be regarded as explaining through the written opinion, and as undertaking to clarify, its previous decisions.

The court quoted from its decision in United States vs. Behrman, 258 U. S. 280, and differentiated that case from the Linder case, in the following language:

" 'It may be admitted that to prescribe a single

dose or even a number of doses, may not bring a physician within the penalties of the act; but what is here charged (in the Behrman case) is that the defendant physician by means of prescriptions has enabled one, known by him to be an addict, to obtain from a pharmacist the enormous number of doses contained in 150 grains of heroin, 360 grains of morphine, and 210 grains of cocaine' — three thousand ordinary doses!

"This opinion related to definitely alleged facts and must be so understood. The enormous quantity of drugs order, considered in connection with the recipient's character, without explanation, seemed enough to show prohibited sales and to exclude the idea of bona fide professional action in the ordinary course. The opinion cannot be accepted as authority for holding that a physician, who acts bona fide and according to fair medical standards, may never give an addict moderate amounts of drugs for self-administration in order to relieve conditions incident to addiction. Enforcement of the tax demands no such drastic rule, and if the act had such scope it would certainly encounter grave constitutional difficulties."

The court then proceeded:

"The Narcotic Law is essentially a revenue measure and its provisions must be reasonably applied with the primary view of enforcing the special tax. We find no facts alleged in the indictment sufficient to show that petitioner had done anything falling within definite inhibitions or sufficient materially to imperil orderly collection of revenue from sales. Federal power is delegated, and its prescribed limits must not be transcended even though the end seems desirable. The unfortunate condition of the recipient certainly created no reasonable probability that she would sell or otherwise dispose of the few tablets entrusted to her; and we cannot say that by so dispensing them the doctor necessarily transcended the limits of that professional conduct with which Congress never intended to interfere."

The decision in Linder vs. United States, just quoted from at some length, obviously does not give a physician free rein in the prescribing of narcotics. Section 2 of the Harrison Narcotic Act makes it unlawful for any person to sell, barter, exchange, or give away, any of the narcotic drugs covered by the act, except in pursuance of a written order of the person to whom such article is sold, bartered, exchanged, or given, on a form to be issued in blank for that purpose by the Commissioner of Internal Revenue. Then follows an exception, providing that nothing contained in the section shall apply:

"To the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist, or veterinary surgeon registered under this act in the course of his professional practice only. . . ."

Construing this exception, the Supreme Court of the United States said in Jin Fuey Moy vs. United States, 254 U. S. 189:

"Manifestly the phrases 'to a patient' and 'in the course of his professional practice only' are intended to confine the immunity of a registered physician, in dispensing the narcotic drugs mentioned in the act, strictly within the appropriate bounds of a physician's professional practice, and not to extend it to include a sale to a dealer or a distribution intended to cater to the appetite or satisfy the craving of one addicted to the use of the drug. A 'prescription' issued for either of the latter purposes protects neither the physician who issues it nor the dealer who knowingly accepts and fills it."

As I see the situation, a physician may lawfully prescribe to relieve the acute sufferings of an addict due to the partial or total withdrawal of the drug to which he is addicted, or may even give a reasonable amount of that drug to the patient. He may not, however, supply more than is necessary to relieve the acute condition of the patient, nor, I believe, can he continue daily to supply enough to relieve such acute conditions as they arise from day to day. Nor can a physician, I believe, lawfully prescribe even to relieve the sufferings of an addict who he believes is using those sufferings for the purpose of obtaining supplies of narcotic drugs from two or more physicians. The distinction is to be drawn between prescribing or dispensing to relieve acute suffering, and prescribing or dispensing merely to cater to the appetite. If a physician prescribes or dispenses merely to cater to the appetite, he is violating the Harrison Narcotic Act; but the difficulty in these cases for the prosecuting officers to convince the jury beyond a reasonable doubt that the physician prescribed for that purpose and not for the relief of acute suffering. Of course, the prescribing or dispensing of enormous doses, or the receipt in prescribing or dispensing, would be evidence in support of such a charge.

Nothing in the Harrison Narcotic Act nor in any of the decisions based on that act has taken from the states the right to enact any legislation on the subject of narcotic addiction that is authorized under the state constitutions, provided, of course, it does not actually tend to nullify the Harrison Narcotic Act.

I have had to go at great length into this case, because otherwise it seemed impossible to convey a clear idea of the situation. It has not seemed to me desirable to take up the article in "The White Cross," which is so inaccurate and so strewn with partial statements of the truth as to convey what seems to me to be an entirely wrong idea of the situation.

Incidentally, the Harrison Narcotic Act itself is in danger, under a decision rendered by the United States Supreme Court, January 4, 1926, in U. S. vs. Daugherty. In that case the court said:

"The constitutionality of the Anti-Narcotic Act, touching which this court so sharply divided in United States vs. Doremus, 249 U. S. 86, was not raised below and has not been again considered. The doctrine approved in Hammer vs. Dagenhart, 247 U. S. 251; Child Labor Tax Case, 259 U. S. 20; Hill vs. Wallace, 259 U. S. 44, 67, and Linder vs. United States, 268 U. S. 5, may necessitate a review of that question and is hereafter properly presented."

The case included held the Child Labor Law unconstitutional and also the law involving the taxing of certain grain exchange transactions. The statement just quoted from U. S. vs. Daugherty is apparently a broad intimation that if the question

of the constitutionality of the Harrison Narcotic Act again comes before the court, while constituted as at present, the decision will be against its constitutionality.

Yours truly,

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VALUE OF THE TREATMENT OF ARSPHENAMINE REACTIONS AND METALLIC POISONING BY THIOSULPHATE AND HYPOSULPHITE

During the past two years sodium thiosulphate has gained some favor in the treatment of the reactions, especially the dermatitis, from arsphenamine and as an antidote in poisoning from lead, mercury and arsenic. The benefits have been generally ascribed to some chemical action of the thiosulphate which is assumed to render these agents less toxic. There is no doubt that thiosulphate can reduce mercuric chloride in the test tube to the relatively insoluble and less active calomel. However, next to nothing is known of the possible reactivity with mercury circulating in the body, and for that matter also with other metallic salts and arsphenamine. Unfortunately, the form in which metallic compounds exist in the body is not known. The subject would seem, therefore, difficult of investigation from the chemical viewpoint. Speculation on the basis of unknown or doubtful chemical possibilities does not help in establishing the rationale of the thiosulphate treatment. However, attempts have been made from the pharmacological side to determine what, if any, basis for this treatment exists.

In their studies of the antagonism between thiosulphate and arsenical compounds, Kuhn and Loevenhart of the University of Wisconsin found that the intravenous injection of thiosulphate in rabbits had some protective action against the just lethal dose of sodium arsenite. The results, however, were not striking. The rate of urinary excretion of arsenic after arsenite by stomach and intravenously was markedly diminished. The amount excreted was greatly reduced despite considerable diuresis produced by the thiosulphate. Apparently there was retention of arsenic, a result that is exactly the opposite of that usually assumed. The thiosulphate reduced the therapeutic efficiency of tryparsamide in experimental trypanosomiasis in rats. Kuhn and Loevenhart concluded that the thiosulphate does not mobilize arsenic, but seems to cause its transformation into a less toxic, less therapeutically efficient and less easily excretable product. On the other hand, Harrison of London reports that Dale found a 2.5 per cent solution of thiosulphate to have no deleterious influence on the action of 914, an organic arsenical used in the treatment of trypanosomiasis.

In their study of patients with dermatitis and jaundice from neoarsphenamine and acute arsenic poisoning, Kuhn and Reese of the Wisconsin Psychiatric Institute and Edgewood Arsenal found that arsenic excretion was increased after the oral administration of 2 gm. thiosulphate in 120 to 150 cc. of physiological sodium chloride solution, and also after 10 cc. of a 5 per cent solution (0.5 gm.) intravenously in daily doses of about 1 gm. The increased excretion was suggested to be due in part to diuresis, but apparently there is a contradiction in the excretory results of Kuhn et al. from animals and patients. The human kidney seemed to be protected against the injurious action of arsenic.

The use of thiosulphate in the mercuric chloride poisoning of dogs has been studied recently by Haskell, Henderson and Hamilton of the Virginia Medical College with completely negative results. These authors point to the great variability in the fatal dose of sublimate for dogs, a factor that may be the source of considerable error in evaluating the benefits of the treatment. In spite of early and repeated intravenous administration of thiosulphate, the average duration of life of poisoned dogs remained the same as of the controls.

The results of Haskell et al are in partial agreement with those of Hesse of the University of Breslau, who has made an extensive investigation of mercuric chloride poisoning in dogs by various agents. The only agents found by Hesse to be effective in reducing mortality from fatal dosage of the sublimate were sodium phosphite and sodium hyosulphite ($Na_2S_2O_4$). Hyposulphite must not be confused with thiosulphate ($Na_2S_2O_3$). The hyposulphite was especially investigated. It was effective only when given by mouth and totally inert when given intravenously or hypodermically. The reason for its inertness intravenously was the reduction of the hyposulphite in the tissues, a chemical change that probably also occurs with the thiosulphate. When given by mouth the hyposulphite came in contact with the corrosive sublimate and reduced it to calomel together with the formation of demonstrable quantities of sulphur and sulphur dioxide, and in exactly the same way as the bichloride was reduced in the test tube. That is, the hyposulphite had to be brought in direct contact with the mercuric chloride in order to be effective as an antidote. The liberation of sulphur and sulphur dioxide also occurs in water and presumably in the tissues after hypodermic administration, and, therefore, the presence of these irritating products precludes its use hypodermically. Hesse claims that the hyposulphite itself is non-toxic, 0.2 gm. daily for a week being harmless. The dose recommended by mouth for man is 1 gm. daily administered in capsules containing 0.2 gm. hyposulphite and 0.2 gm. bicarbonate. The object of the bicarbonate is for neutralization of the gastric acidity which apparently decomposes the salt. Hesse estimates that from 1.3 to 1.4 gms. hyposulphite will completely reduce 1 gm. of mercuric chloride in a 1 per cent solution. The hyposulphite may cause vomiting, which, of course, would be beneficial in removing any unreduced sublimate. However, if it is desired to avoid vomiting this can be done by the administration of morphine, and then the hyposulphite is retained and acts more effectively on the sublimate. The hyposulphite was not tried by Hesse in poisoning from lead and arsenic.

Concerning the fate of thiosulphate and hyposulphite in the body, very little is known. Both appear to be reduced in the tissues in part, at least. According to Nyiri, from 30 to 40 per cent of thiosulphite given intravenously in dogs is destroyed,